

REMARKS

Applicants thank the Examiner for the time taken to examine the application. Claims 1, 3-6, 8, 11 and 14-17 have been amended. Claims 12-13 and 18 have been cancelled. New claims 19-28 have been added. Therefore, claims 1-11, 14-17 and 19-28 are pending. Applicants respectfully requests reconsideration of the claims in view of the above amendments and the following remarks.

Claim Objections

The Office Action objects to claim 15 because of a typographical error in line 5. Claim 15 has been amended and, as a result, the phrase containing the typographical error has been removed. Thus, Applicants believe the claim objection is now moot.

35 U.S.C. § 102(e)

The Office Action rejects claims 1-18 as anticipated by U.S. Pub. App. 2004/0106868 to Liew et al. (hereinafter “Liew”). Applicants believe Liew does not disclose all of the claim limitations of independent claims 1 and 15 as amended. Amended claim 1 is directed, in part, to a method of predicting a fracture path in a bone including identifying and, thereby, creating two or more parameter maps of at least two positions in an ROI that exhibit substantially similar bone parameter characteristics, generating a composite parameter map from the two or more created parameter maps, and analyzing the composite parameter map. Amended claim 15 is directed, in part, to a method of predicting the risk of fracture of a bone including identifying and, thereby, creating two or more parameter maps of at least two positions in an ROI that exhibit substantially similar bone parameter characteristics, generating a finite element model from at least two of the parameter maps, applying to the generated finite element model simulated force vectors that would occur during a fracture incident, and determining the minimum forces required for fracture to occur.

The Office Action states that Liew discloses a method to predict a fracture path and/or predict the risk of fracture in paragraphs 39, 43 and 76-78 (in reference to then pending claims 12, 13 and 15-17). Applicants respectfully disagree. At paragraph 39, Liew discloses that “data from different ROI’s can be combined or compared as desired”

(emphasis added). At paragraph 43, Liew defines a parameter map: “The results of the analyses for each parameter can be stored in a matrix space, *e.g.*, where its position corresponds to the position of the sampling point where the analysis occurred, thereby forming a map of the spatial distribution of the parameter (a parameter map).” At paragraph 76, Liew discloses a method for “evaluating the amount or the degree of normal, diseased or abnormal tissue or the degree of degeneration in a region or a volume of interest using one or more of the parameters specified in Table 1, Table 2 and/or Table 3.” This method includes evaluating the progress of a patient by performing the disclosed method at subsequent time intervals. At paragraph 77, Liew discloses that one or more of the parameters in the tables “can be analyzed separately or the data can be combined.” At paragraph 78, Liew discloses that the “method for assessing the condition of a bone or joint in a subject can be fully automated.” Thus, none of these paragraphs disclose a method to predict a fracture path and/or predict the risk of fracture. In fact, in Liew, the word fracture appears only once—at paragraph 107. In that paragraph, Liew discusses non-parametric tests “as a means of testing whether variations between empirical data and experimental expectancies are attributable to chance or to the variable or variables being examined.” One of the listed tests is the lifetime risk for osteoporotic fracture.

In contrast, in the current application, predicting a fracture path and/or risk of fracture is discussed, for example, in Sections 3.1.4.2 (“Fracture Path Prediction”) and 3.1.4.3 (“Fracture Risk Prediction”) at paragraphs 210-216. Thus, because Liew does not disclose all of the limitations of independent claims 1 and 15 as amended, Liew cannot anticipate these claims. Further, because claims 2-11, 14 and 16-17 depend from claim 1 and claims 19-28 depend from claim 15, Liew does not anticipate these dependent claims for at least the same reasons Liew does not anticipate claims 1 and 15.

Conclusion

All pending claims are believed to be in a form suitable for allowance. Therefore, the application is believed to be in a condition for allowance. The Applicants respectfully request early allowance of the application. The Applicants request that the Examiner contact the undersigned, Karen A. Buchanan, if it will assist further examination of this application.

Applicants petition for a three-month extension of time. In the event that a further extension is needed, this conditional petition of extension is hereby submitted. Applicants request that deposit account number 19-4972 be charged for any fees that may be required for the timely consideration of this application.

Date: October 23, 2008

Respectfully submitted,

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